Department of Defense Earned Value Central Repository

Debbie Tomsic, OUSD(AT&L)
John McGahan, Tecolote

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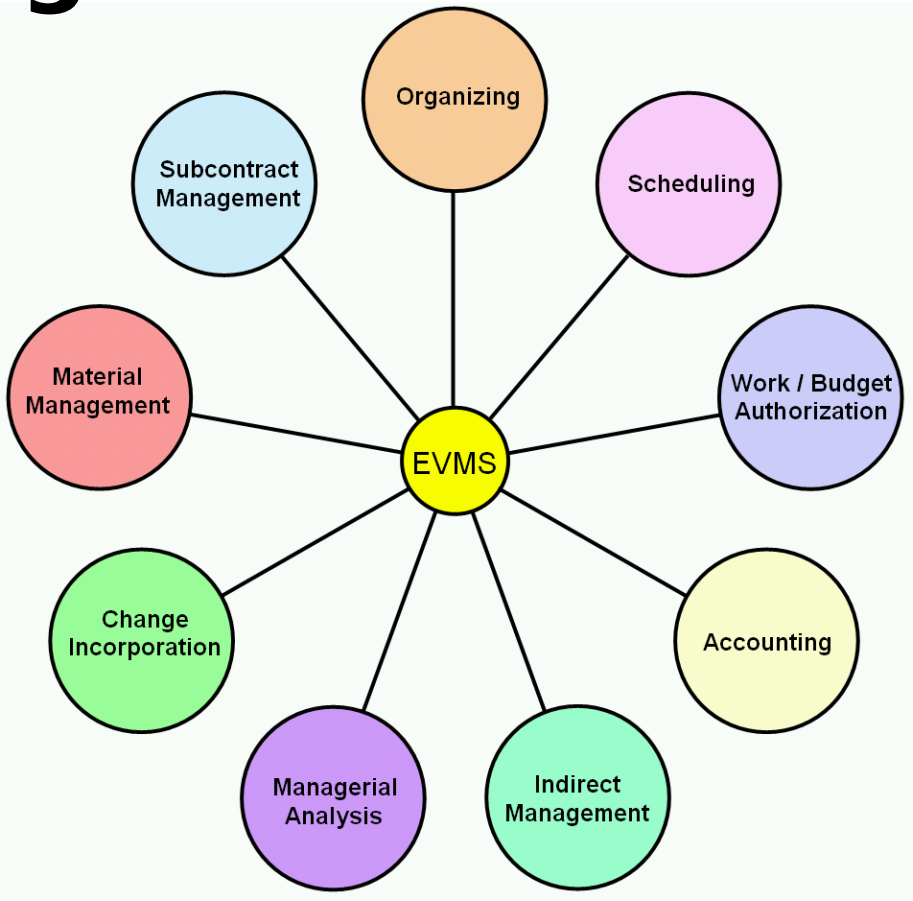
Agenda

- About Earned Value Management (EVM)
- DoD EVM Policy
- Earned Value (EV) Central Repository (CR)
- CR Interface with DAMIR and Service Systems

About Earned Value Management

- EVM is the use of an integrated management system that coordinates work scope, schedule, and cost goals and objectively measures progress toward these goals
- EVM is a widely accepted industry best practice for project management in government and commercial sectors
- Governed by industry standard (ANSI/EIA-748)
- The 32 EVM system guidelines in ANSI/EIA-748 address nine management processes



A management control tool for program managers

DoD EVM Policy

DoD EVM Policy

Contracts	Thresholds	Requirements
Cost/Incentive Equal to or Above Threshold	≥ $50M	- Compliance with EVM system standard - Formal EVM system validation - Contract Performance Report - Integrated Master Schedule - Integrated Baseline Reviews - Ongoing surveillance
Cost/Incentive Less Than Upper Threshold but Equal to or Above Lower Threshold	< $50M but ≥ $20M	- Compliance with EVM system standard - **No** formal EVM system validation - Contract Performance Report (tailored) - Integrated Master Schedule (tailored) - Integrated Baseline Reviews - Ongoing surveillance
Cost/Incentive Less Than Threshold	< $20M	- EVM optional (risk-based decision) - Cost-benefit analysis required

Applies to cost/incentive contracts awarded after April 2005

EVM Reporting Requirements

- EVM policy applied to DoD contracts via Defense Federal Acquisition Regulation Supplement (DFARS) clauses (new clauses to be released soon)
- Reporting requirements put on contract via Contract Data Requirements Lists (CDRLs)
- Data Item Descriptions (DIDs) provide instructions for completing reports
  - Contract Performance Report (cost and schedule reporting)
  - Integrated Master Schedule (schedule reporting)
  - Contract Funds Status Report (funding projection)
- Common, product-oriented work breakdown structure required for EVM reports and Cost and Software Data Reports

It's important to get the requirements right up front - fixing problems later is more painful

Sources of Information on EVM

- **Refer to policy and guidance documents, to include frequently asked questions on DoD EVM web site: http://www.acq.osd.mil/pm**

- **Use contract requirements checklist as quick reference and refer questions to points of contact**

Key to success is integrated approach between program management, EVM, and contracting personnel

EV Central Repository

EV Central Repository: Background and Objectives

- In August 2006, USD(AT&L) announced initiatives to improve acquisition execution situational awareness
  - Improve collection, transparency, and availability of key program data
  - Improve data analysis to facilitate timely and effective management action
- Acquisition Data Consolidation
  - Demonstrate feasibility of establishing an automated CR for key acquisition data, e.g., Contract Performance Reports (CPRs)
  - Evaluate and improve contracting approaches for EVM and Cost and Software Data Reporting (CSDR)
  - Assess and improve EVM and CSDR policies, processes, and reporting formats

"There is the need for improved collection, transparency, and availability of key program data"

Benefits of CR

- Centralized reporting, collection, and distribution of EVM data
- Complete, accurate, timely, and secure transfer of electronic data directly from contractor to CR
- Secure and controlled warehousing of data
- Controlled, timely, and secure access to data by authorized users

Altering the way defense acquisition data is gathered and distributed

Phase 1: Pilot Project

- Participating Programs
  - Army: ARH, JLENS, Land Warrior
  - Navy: SM-6, MUOS, P-8A (MMA)
  - Air Force: SBIRS High, C-17, Global Hawk

- Pilot began in December 2006 with submission of November CPRs

- Key Results
  - Successful reporting of CPRs and Contract Funds Status Reports (CFSRs)
  - CR provided secure controls and ready access to authorized users
  - Implemented with minimum cost and disruption to PMs and contractors
  - Demonstrated that data transparency is achievable and will help improve situational awareness

- In July 2007, USD(AT&L) directed full implementation of CR system on all EVM reports for ACAT I programs

"The CR pilot results provide the foundation for full implementation"

Phase 2: Full Implementation

- Complete Phase 1 to finalize policies, procedures, and business rules
- Systematically phase in remaining ACAT ID and IC programs by January 2008 with ACAT IA being added in follow-on phase
- Finalize documentation (CR manual and user guides) by February 2008
- EVM reports to be included in the CR
  - CPR (typically monthly)
  - CFSR (typically quarterly)
  - Integrated Master Schedule (IMS) (typically monthly to PM but initially will be quarterly to CR)
- All CR report files eventually will be submitted in XML format following formal publication of United Nations Center for Trade Facilitation and eBusiness XML standards and availability of software to process data

"The goal is to have the ACAT ID and IC programs operational in the CR system with their January 2008 submissions"

Plan to Add Programs to CR

Current Pilot	July 2007 -- Special Case	September 2007 -- Rotary Aircraft	October 2007 -- Ships and Submarines	November 2007 -- Space, Missiles, and Munitions	December 2007 -- Aircraft and C3I	January 2008 -- Remaining ACAT ID and IC
JLENS	EFV	Blackhawk Upgrade (UH-60M)	Cobra Judy Replacement	AEHF	ADS (AN/WQR-3)	STRYKER
ARH		CH-47F	CVN 21	GBS	CEC	CHEM DEMIL-ACWA
SM-6		Longbow Apache	CVN 68	NAVSTAR GPS	FBCB2	CHEM DEMIL-CMA
Global Hawk (RQ-4A/B)		AB3 (Apache Block III)	DDG 1000 (DD(X))	NPOESS	JTRS GMR (CLUSTER 1)	CHEM DEMIL CMA NEWPORT
P-8A (MMA)		CH-53K (HLR)	DDG 51	Minuteman III GRP	JTRS HMS (CLUSTER 5)	DIMHRS (Pers/Pay)
Land Warrior		MH-60S	LCS	Minuteman III PRP	JTRS JOINT WAVEFORM	FCS
SBIRS High		VH-71	LHA Replacement	AGM-88E AARGM	MIDS	NMT
MUOS		V-22	LPD 17	AIM-9X	MP RTIP	EA-18G
C-17A			T-AKE	AMRAAM	MPS	F/A-18E/F
			SSGN (Ohio Class)	GMLRS	F-35 (JSF)	C-130J
			SSN 774 (Virginia Class)	PATRIOT PAC-3	E-2D AHE	C-130 AMP*
				PATRIOT/MEADS CAP	B-2 RMP	
				EXCALIBUR	C-5 RERP	
				JASSM	WIN-T*	

* Month indicated or earlier pending approval of restructured Acquisition Program Baseline

ERM

Implementation of EV CR

CR Policy: Guiding Documents

- Individual contract CDRLs
- DIDs for CPR, CFSR, and IMS
- USD(AT&L) memos - August 2006 and July 2007
- Central Repository Manual
- User guides
  - Registration Guide
  - Reviewer Guide
  - Submitter Guide
  - Analyst Guide

Refer to the manual and user guides on CR web site for detailed guidance and instructions

CDRL Changes

- Necessary CDRL changes
  - Add CR to distribution addressee list (https://ders.dcarc.pae.osd.mil/DCARCPortal) [all CDRLs]
  - Request periodic upload of CPR history file [CPR CDRL]
  - Any changes to ensure that current EVM policy is being followed regarding submission of CPR in ANSI X-12 839 Transaction Set (i.e., TRN or wInsight XML files) [CPR CDRL]

- Example CDRLs for CPR, CFSR, and IMS available at http://dcarc.pae.osd.mil/EVM/Index.aspx

Adding the CR to the CDRL distribution list is a no cost change

CR is Sole Source for EVM Reports

- CR will be sole source for DoD EVM reports for ACAT I programs
  - Contractors will have one submission point
  - Program offices, Services, and OSD analysts will have one authoritative source – all looking at the same data at (nearly) the same time
  - OSD will have more timely access to Level 1 data in DAMIR system
- For new contracts, CR should be designated sole distribution addressee on CPR and CFSR CDRLs
- For existing contracts, a Single Process Initiative will make CR the sole addressee for CPR and CFSR (in early 2008)
- IMS will have dual path (to the program office as required by the CDRL and to the CR quarterly) until file size and format issues are resolved

"Effective immediately, all new ACAT I programs will structure their contracts with EVM…so the addressee…for data is the CR"

CR Business Rules

- Applies to ACAT 1D and 1C program contracts with EVM reporting requirements
- What is submitted and when?
  - What's on contract; due on contracted dates
    - CPR – monthly upload as required on CDRL
    - CFSR – as required on CDRL
    - IMS – quarterly upload of all CDRL-required items
  - One submission per task/contract/subcontract
  - Event-driven upload of history file
    - Initial submission (and after re-baselines)
    - If using wInsight, a WSA or backup file
    - Or else, equivalent "history" file

Must be complying with <u>correct</u> EVM policy based on when contract was awarded

CR Business Rules

- Submission form factors
  - CPR:
    - Formats 1-5 as defined on contract
    - Formats 1-4 EDI 839 or XML (e.g., wInsight TRN or XML)
    - Formats 1-4 Human readable (e.g., Excel)
    - Format 5 Human readable (e.g., MS Office)
  - CFSR: Human readable (e.g., Excel)
  - IMS: Coordinated with CR Help Desk
  - No executables, macros, or links
  - Gradual transition to XML schema
- Submission process
  - Day 0: Contractor submits to CR
    - Reviewer and submitter teams notified
    - Level 1 extract data sent to Service databases (AIM, Dashboard, SMART) - 10-day review window before published to DAMIR
  - Day 10: Level 1 extract data published to DAMIR unless rejected

Must be complying with <u>correct</u> EVM policy based on when contract was awarded

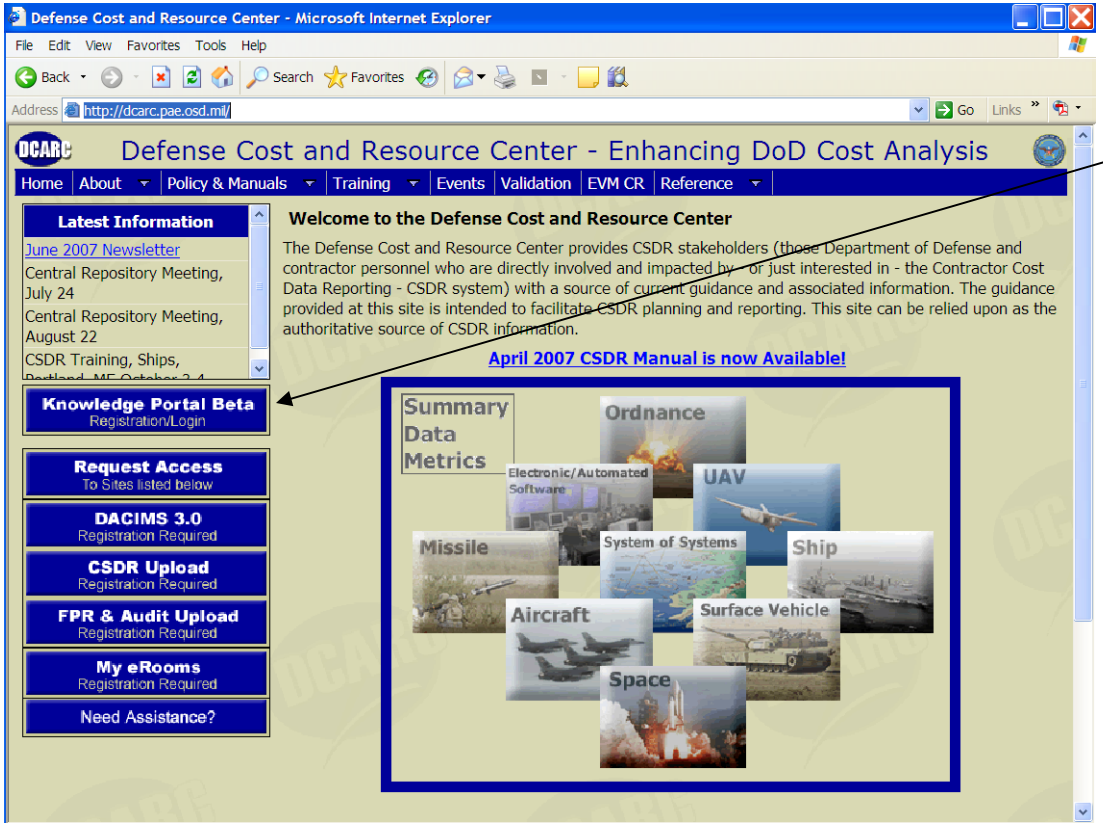
Subcontractor Submissions

- Existing contracts
  - If subcontractors submit EVM reports directly to the PMO, the subs must submit them to the CR
  - If the prime contractor submits reports for subcontractors, the prime must submit them to the CR
- New contracts
  - CR must be the sole addressee on the CDRL (whether directly from the sub or via the prime)

Requirements flow down to applicable subcontracts via DFARS

Accessing the CR

- Access CR from DCARC public site
  - http://dcarc.pae.osd.mil/
  - Via the Knowledge Portal
- Or directly: https://dcarc.pae.osd.mil/DCARCPortal/



Access DCARC Portal

Digital certificate or DoD CAC required

CR is Role Based

- Analyst
  - Access published data submissions archived in repository
  - For example, OSD staff, Cost Agency staff, and DCMA Headquarters staff
- Submitter
  - Authorized on one or more contracts to submit data
    - Access submission events for assigned contracts
    - Prepare and submit data to CR
  - Receive submission status notifications
  - For example, materials developers, weapon system contracts

Business rules govern reporting, access, and availability of data

CR is Role Based

- Reviewer
  - Assigned to one or more contracts, for acceptance/ rejection of submissions
  - Lead reviewer:
    - Defines submission events (submission dates, identified CDRLs, etc.)
    - Identifies submitters and reviewers
    - Final decisions for accept/reject and PUBLISH
  - Supporting reviewer: Accept/reject vote and comment
  - Receive notification when data submission is available for review
  - For example, program office (government, support contractors), DCMA

Business rules govern reporting, access, and availability of data

Business Process Flow

Report As Of date

Submitter uploads reports to CR on the proper submission event

Data viewable only by assigned review and submitter teams

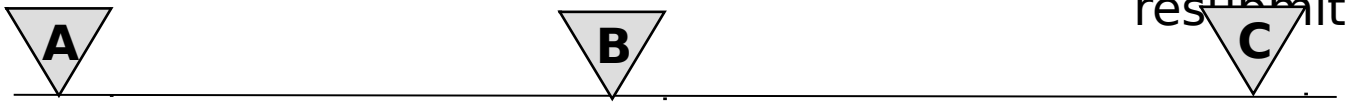
Lead reviewer publishes submission and it moves to repository

Data forwarded to DAMIR

Reports viewable by all approved analysts

or

Lead reviewer rejects submission triggering rejection notice and resubmit



-12 to 17 business days*

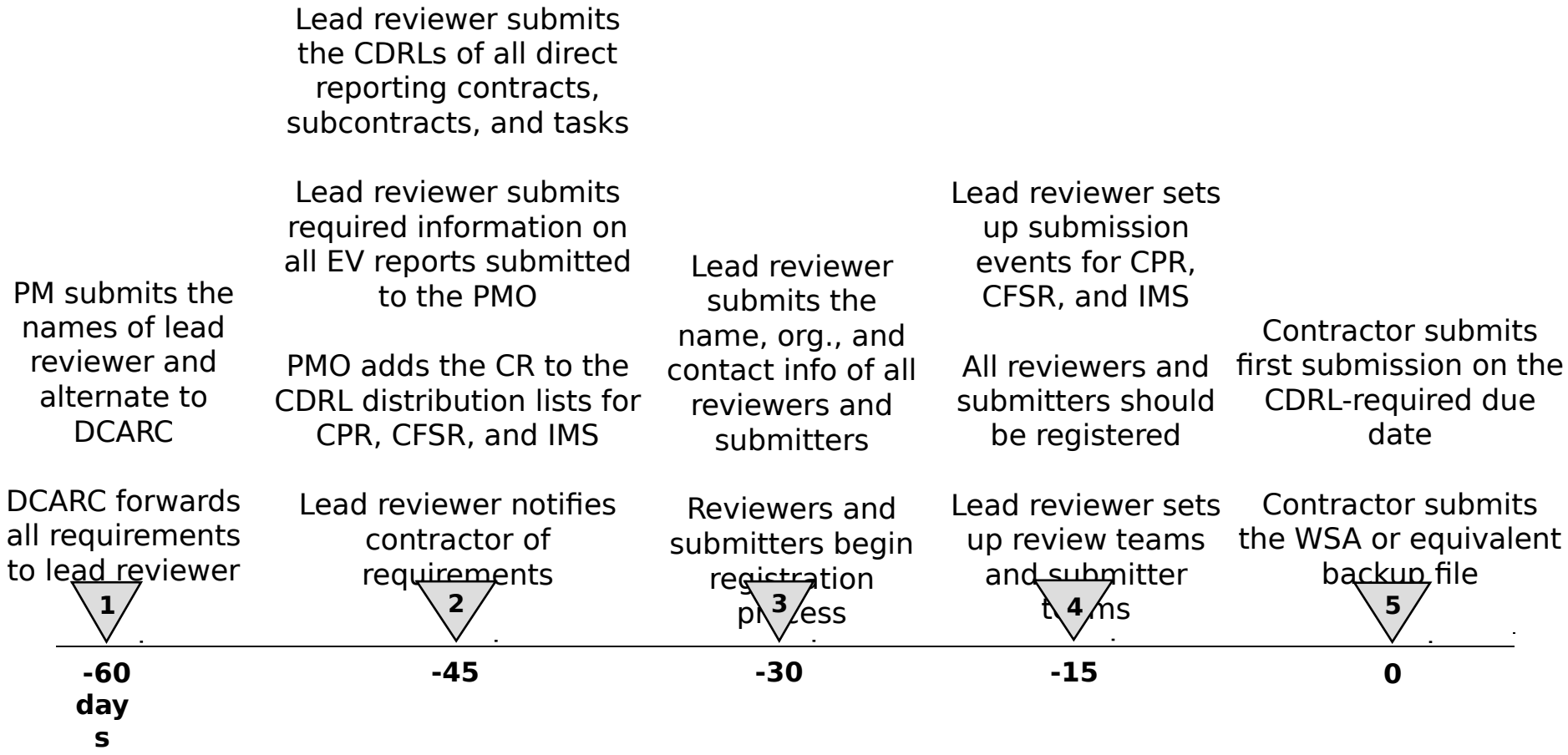
0 – CDRL-required submission date

+10 calendar days or less

* -- Effective with new contracts beginning April 2005. Legacy contracts have up to 25 calendar days from As Of date

Getting Started

Actions Before First CR Submission



Timeline: Steps 1 and 2

PM submits the names of lead reviewer and alternate to DCARC

DCARC forwards all requirements to lead reviewer

Lead reviewer submits the CDRLs of all direct reporting contracts, subcontracts, and tasks

Lead reviewer submits required information on all EV reports submitted to the PMO

PMO adds the CR to the CDRL distribution lists for CPR, CFSR, IMS

Lead reviewer notifies contractor of requirements

Timeline: Steps 3, 4, and 5

Lead reviewer submits the name, org., and contact info of all reviewers and submitters

Reviewers and submitters begin registration process

3

-30

Lead reviewer sets up submission events for CPR, CFSR, and IMS

All reviewers and submitters should be registered

Lead reviewer sets up review teams and submitter teams

4

-15

Contractor submits first submission on the CDRL-required due date

Contractor submits the WSA or equivalent backup file

5

0
Due Date

CR Interface with DAMIR and Service Systems

Interface Concept of Operations

- CR is authoritative source for objective (contractor-submitted) EVM data (e.g., CPR)
  - CR makes Level 1 data available to Service systems on Day 1
  - CR pushes Level 1 data to DAMIR on Day 10
  - Outside CR - PM review team reviews data in Service system and/or PM system
- Services control subjective EVM data (e.g., PM estimates, assessments, etc.)
  - Services define/support interoperability with DAMIR for subjective data (Service systems make PM inputs available to DAMIR)
  - Services define/manage review process
  - Services are able to leverage investment in current systems and business practices (Service-specific innovations)

Results in reduced manual data entry and more timely access to data for DAES/SAR reporting

Implementation Requirements

- DAMIR
  - Provide push web service to support objective data from CR
  - Pull subjective data from Services systems
  - Merge objective/subjective data streams into a single record
- Service Systems
  - Access objective data in CR (push and/or pull)
  - Support DAMIR pull of subjective data
- EV CR
  - Implement DAMIR push web service (objective data only)
  - Support Services using DAMIR-like push service

OSD is accommodating desired Service-specific approaches

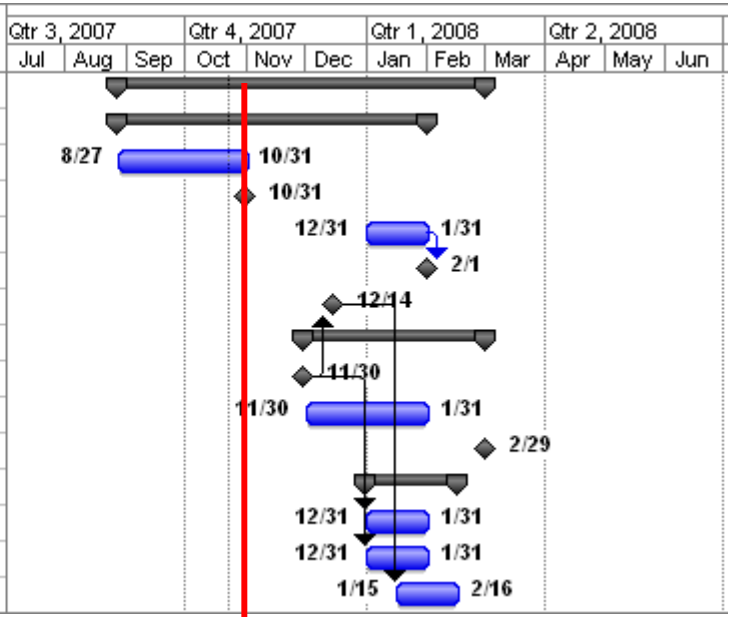
Known Issues

- Some contracts require multiple CPRs per month (for a single “task”)
  - CPRs may not be mutually exclusive (costs don’t add)
  - May be aggregated into a single record (effort number) in DAMIR
  - Requires analyst manual effort; may not remain consistent
- Contracts and reporting requirements need to be consistent between DAMIR, Services, and CR
- Programs/contracts not compliant with EVM policy (non-standard data formats and submission requirements)

Program-unique issues being handled on a case-by-case basis

Schedule Milestones

ID	Task Name
81	**Technical Milestones**
82	**CR Development**
83	Finalize DCMA/SUPSHIP Oversight role capability
84	CR Spec available to Services and DAMIR
85	CR Pull system Web Services test available (for AIM, SMART)
86	CR Pull system reaches IOC
87	CR Push system available (for DAMIR, Dashboard)
88	**DAMIR Development**
89	DAMIR Web Services Spec available
90	DAMIR develops split data set capability
91	DAMIR Level 1 Push IOC
92	**Service Systems Development**
93	Army AIM test of Pull system from CR
94	Air Force SMART test of Pull system from CR
95	Navy Dashboard test of Push system from CR



- Now available for download/comment:
  - http://dcarc.pae.osd.mil under the EVM-CR public area
  - Updated: CR Users Guide (draft)
  - New: CR Web Service Specification (draft)

CR Points of Contact

- Policy and implementation questions

Mike Metcalf, IDA
mmetcalf@ida.org
(703) 575-4696

Jack Cloos, IDA
jcloos@ida.org
(703) 575-4667

- Technical questions

John McGahan, Tecolote
jmcgahan@tecolote.com
(253) 564-2006

Or contact the CR Help Desk at (253) 564-1979